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Study of the Feasibility of Contracting Out Selected Functions of the Montana Department of Transportation

June, 1996

submitted to the Montana Department of Transportation
and the Montana Legislative Branch, Legislative Audit Division

Infrastructure
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Summary and Conclusions

The Legislative Audit Committee of the Montana Legislature, in cooperation with the Montana Department of Transportation ("MDT"), sponsored this study to evaluate the feasibility of privatizing three functions of the MDT: (i) preliminary surveys; (ii) highway and bridge design; and (iii) construction contract administration ("CCA"). These are collectively referred to as the "selected functions". They include many of the core competencies of the department, for each of these functions is fundamental to the ongoing process of highway construction and improvement. In addition to designing and delivering construction projects for the department, these functions also maintain extensive statewide databases on the characteristics of state-owned and operated highways.

The privatization of public services has been a topic of interest to legislators and to executive staff at every level of government, nationally and internationally. This interest has been spawned by numerous cases in which government functions have been contracted out to private providers, frequently achieving not only lower costs but also comparable or improved service quality. Given the dollar resources dedicated to the selected functions—about $33 million per year—and the availability of qualified private contractors, it is natural to invite a feasibility analysis regarding their privatization.

Privatization, as referred to herein, would entail the performance of the selected functions by private contractors. MDT's role would be limited to quality assurance and consultant contract administration.

The key question to ask in such an analysis is *would the State of Montana be better off if the selected functions were privatized?* This question goes beyond the mere feasibility of privatizing the functions—clearly this could be done since qualified contractors are available. Rather, the question asks if the potential results of privatization are desirable. This requires placing the analysis in the context of evaluative criteria of importance to the state. Although the comparative cost and service quality of MDT and contractor services are fundamental to the decision to privatize, other factors (such as the risk of nonperformance) need to be considered as well.

The conclusion of the feasibility analysis presented herein is that *the selected functions should not be fully privatized.* This conclusion is based on a comprehensive and dispassionate analysis of the comparative costs and quality of MDT and contractor performance of the selected functions. In announcing this conclusion, it is important to note that MDT currently contracts out for a significant portion of the selected functions. Almost universally, the unit of work that is contracted out is an entire project, as opposed to discrete tasks. This practice makes sense in the context of MDT's operating environment, and is similar to the practices of other states that were contacted in the course of this study.

The key findings underlying this conclusion are as follows:

- **The hourly cost of contractor services exceed those of MDT by approximately 69%.**

  This result is based on a detailed assessment of MDT and contractor costs per hour, wherein both sets of costs were fully burdened. The fully-burdened contractor cost is based on the contract amount (plus supplements, as relevant), plus the cost of quality assurance and contract administration by MDT, divided by the contractors' time-on-job. MDT's fully-burdened costs per hour include all direct charges to projects, plus an allocation of department-wide indirect costs, including equipment depreciation and the estimated rental value of buildings and land, all divided by MDT's time-on-job.

- **In some cases, contractor costs for an entire project can be less that MDT's cost, despite MDT's cost-per-hour advantage.**

  In an analysis of MDT and contractor costs for six preconstruction projects, inclusive of preliminary surveys and design, one consultant-lead project produced a cost savings. Although the scope of this analysis was very limited, the results are logical—circumstances will arise in which a contractor is more appropriately suited to undertaking a project, and can deliver a product more efficiently than MDT. A two-step process is used by MDT to select projects to contract out: (i) the volume of work to be contracted out is based on MDT's projected workload for various skills and the availability of its workforce; and (ii) once the overall volume is estimated, MDT selects individual projects based on the type of project (e.g., does it demand specialized skills, such as signalization) and the need for an independent opinion. Thus, MDT's process inherently acknowledges that contracting out is effective in selected circumstances.

- **The overall quality of services provided by survey and design contractors appears to be comparable to that of MDT.**

  This finding is based on an analysis of change orders on construction projects, for MDT- and consultant-designed projects. Although consultant-designed projects have a higher incidence of change orders than do MDT projects as a whole, the types of projects assigned to design consultants inherently have more change orders irrespective of the design authority. Once the reasons for the change orders are taken into account, the portion that is attributable to design-related tasks is similar for MDT and its contractors.

  The quality of CCA projects that have been contracted out defies easy measurement, because very few projects fall into this category. To-date, contractor performance has fallen below MDT expectations, due primarily to the contractors' less intimate understanding of rules and regulations—state and federal—to which they must adhere.

- **The percentage of work currently contracted out by MDT is within the range of experience of similar western states.**

  Relative to the dollar volume of work performed in-house by MDT, the amounts contracted out for the selected functions are as follows: (i) preliminary surveys, 23%; (ii) highway and bridge design, 32%; and (iii) construction contract administration, 4%. The percentages for the first two functions are very near the midpoint of the experience of nine other western states. For CCA, MDT apparently contracts out less work than do its neighbors.

These results serve to confirm the reasonableness of MDT's current practice of partial privatization. This practice limits the contracting out of projects to those for which it is practical or economic, or both. While the data used in this study were not sufficiently detailed to support an optimization analysis to define the most efficient contracting strategy, empirical evidence suggests that the portion of work contracted out by MDT is reasonable.

The scope of work for this study included two additional topics which were not investigated since they were obviated by the above findings. These topics were: (i) identify factors, such as contract provisions, that would enable MDT to increase the potential success of privatizing the selected functions; and (ii) identify the potential advantages and disadvantages with privatizing the designated function and potential strategies that help mitigate the disadvantages. These topics were obviated due to the absence of two critical preconditions for privatization—that costs could be saved, or that higher quality could be produced for the same cost. The changes in cost needed to make privatization successful are either outside of MDT's control (e.g., a reduction in consultant cost) or irrational (e.g., MDT's in-house costs rise to a level where privatization would be preferable). This logic applies similarly to mitigating the primary disadvantage of privatization—that it would cost more.

Additional information in support of the above conclusions may be found in the following sections of the report: *Methodology and Assumptions,* which describes the study objectives, scope, and methodology; *Background on the Selected Functions,* which describes each function in relation to the MDT organization, and the extent and type of work that is currently contracted out; *Privatization in Other States,* which presents the results of a telephone survey with departments of transportation in other rural, western states; *Cost and Quality of the Selected Functions,* which presents the comparative costs and quality of MDT and contractor services; and *Evaluation,* which interprets the cost and quality findings in the context of decision criteria for privatizing the selected functions.

The body of the report is followed by four appendices which provide additional details on the methodologies used to compare costs and service quality: (a) MDT Cost Allocation Methodology; (b) Contractor Cost Methodology; (c) Project-Level Cost Comparisons; and (d) Change Order Analysis.